

Claims

1. A computerized method for executing a nested transaction in an execution environment supporting a flat transaction only, and wherein a nested transaction encapsulates between a first StartTransaction operation and a corresponding first EndTransaction operation on a first nesting level a hierarchy of one or more further StartTransaction operations and corresponding further EndTransaction operations on further nesting levels, wherein a StartTransaction operation starts a transaction; and wherein an EndTransaction operation ends a transaction; and said method performing a StartTransaction operation by:
 - checking whether said StartTransaction operation is on the first nesting level of said nested transaction, and
 - issuing a corresponding StartTransaction operation within said execution environment only in the affirmative case but not otherwise.
2. A computerized method for executing a nested transaction in an execution environment supporting a flat transaction only according to claim 1, said method performing an EndTransaction operation by:
 - checking, in case said EndTransaction operation is a CommitTransaction operation successfully terminating a transaction, whether said EndTransaction operation is on said first nesting level of said nested transaction, and
 - issuing a corresponding CommitTransaction operation within said execution environment only in the affirmative case but not otherwise.
3. A computerized method for executing a nested transaction in an execution environment supporting a flat transaction only according to claim 2, said method performing an EndTransaction operation in case said EndTransaction operation is a RollbackTransaction operation aborting a transaction as unsuccessful, by issuing a corresponding RollbackTransaction operation within said execution environment independent from the nesting level of said RollbackTransaction operation.
4. A computerized method for executing a nested transaction in an execution environment supporting a flat transaction only according to claim 3, said method performing, once a RollbackTransaction operation has been executed within said nested transaction, any further StartTransaction operation or any further EndTransaction operation within said nested transaction

independent from its nesting level by rejecting it as being in error without issuing a corresponding StartTransaction operation or a corresponding EndTransaction operation to the execution environment.

5. A computerized method for executing a nested transaction in an execution environment

5 supporting a flat transaction only according to claim 4, wherein said method:

checks the nesting level of any of said StartTransaction or EndTransaction operations by a depth counter,

increments said depth counter in the case of processing a StartTransaction operation, and

decrements said depth counter in the case of processing an EndTransaction operation which

10 is a CommitTransaction operation, and

sets said depth counter to zero or an invalid value in the case of processing an

EndTransaction operation which is a RollbackTransaction operation.

6. A computerized method for executing a nested transaction in an execution environment

supporting a flat transaction only according to claim 5, wherein:

15 said method is performed by a facade library separate from said execution environment, and
said execution environment is a database system, and
said facade library provides access from an object oriented environment to said relational
database system.

7. A computerized method for executing a nested transaction in an execution environment

20 supporting a flat transaction only according to claim 6, wherein said facade library comprises a
STORE object class providing access to said database system and said STORE object class
providing said StartTransaction operation as one of its methods.

8. A computerized method for executing a nested transaction in an execution environment

supporting a flat transaction only according to claim 7, said method performing said

25 StartTransaction operation by creating a transaction object for further control of said nested
transaction in case said StartTransaction operation is on the first nesting level.

9. A computerized method for executing a nested transaction in an execution environment supporting a flat transaction only according to claim 8, wherein said transaction object comprises said depth counter, said CommitTransaction operation and said RollbackTransaction operation as object methods.

5 10. A system for executing a nested transaction in an execution environment supporting a flat transaction only, and wherein a nested transaction encapsulates between a first StartTransaction operation and a corresponding first EndTransaction operation on a first nesting level a hierarchy of one or more further StartTransaction operations and corresponding further EndTransaction operations ends a transaction; said system performing a StartTransaction operation, the system
10 comprising,

means for checking whether said StartTransaction operation is on the first nesting level of said nested transaction, and

means for issuing a corresponding StartTransaction operation within said execution environment only in the affirmative case but not otherwise.

15 11. A data processing program for execution in a data processing system comprising software code portions for performing a computerized method for executing a nested transaction in an execution environment supporting a flat transaction only, and wherein a nested transaction encapsulates between a first StartTransaction operation and a corresponding first EndTransaction operation on a first nesting level a hierarchy of one or more further StartTransaction operations and corresponding
20 further EndTransaction operations on further nesting levels, wherein a StartTransaction operation starts a transaction; and wherein an EndTransaction operation ends a transaction; and said method performing a StartTransaction operation by:

checking whether said StartTransaction operation is on the first nesting level of said nested transaction, and

25 issuing a corresponding StartTransaction operation within said execution environment only in the affirmative case but not otherwise.

12. A computer program product stored on a computer usable medium, comprising computer readable program means for causing a computer to perform a method executing a nested transaction in an execution environment supporting a flat transaction only, and wherein a nested transaction

encapsulates between a first StartTransaction operation and a corresponding first EndTransaction operation on a first nesting level a hierarchy of one or more further StartTransaction operations and corresponding further EndTransaction operations on further nesting levels, wherein a StartTransaction operation starts a transaction; and wherein an EndTransaction operation ends a transaction; and said method performing a StartTransaction operation by:

checking whether said StartTransaction operation is on the first nesting level of said nested transaction, and

issuing a corresponding StartTransaction operation within said execution environment only in the affirmative case but not otherwise.

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